



## Coral mortality rises in remote far north

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While heavy rain and cloud cover have brought relief to much of the Great Barrier Reef from the ongoing global coral bleaching event, recent underwater surveys have detected substantial levels of coral mortality in the remote far north on inshore Cape York reefs.

Diver teams have found the worst affected sites are near the tip of Cape York, with up to 50 per cent coral mortality because of prolonged higher than average sea surface temperatures.

However, Great Barrier Reef Marine Park Authority Chairman Dr Russell Reichelt said the extent and severity of bleaching varies greatly across the Reef and the late arrival of the wet season appears to have so far spared most sections of the 344,400 square kilometre Marine Park from coral die-off.

"Further wet weather has brought down ocean temperatures, providing reefs south of Cooktown with a much-needed reprieve," Dr Reichelt said.

"We now need to see if local weather conditions over the next few weeks are favourable enough to prevent further bleaching and to help these reefs recover from the minor to moderate bleaching that we're continuing to see south of Cooktown.

"We still have many more reefs to survey to gauge the full impact of bleaching, however unfortunately, the further north we go from Cooktown, the more coral mortality we're finding.

"The corals in the remote far north of the Reef experienced extremely hot and still conditions this summer, and were effectively bathed in warm water for months, creating heat stress that they could no longer cope with."

"The reefs that we've surveyed so far indicate the large low pressure system over the north last week simply arrived too late for some."

In response to the initial survey findings, the Great Barrier Reef Marine Park Authority has lifted its response to level three (meaning severe regional bleaching), the highest level in its coral bleaching response plan.

"A level three response level means we're stepping up surveys in response to the coral mortality to help us better understand the effects of various pressures on the Reef and help guide management actions," Dr Reichelt said.

"The health and future of the Great Barrier Reef is a priority for us — bleaching reinforces the need for us to continue working with our partners to improve the Reef's resilience to give it the best possible chance of dealing with climate change impacts."

"This means reducing nutrient and sediment loads in catchment run-off, continuing our program to control coral-eating crown of thorns starfish and being part of a global compact to reduce overall emissions."

The Australian Government's Reef 2050 plan is working to improve the Great Barrier Reef's health and resilience so it's better able to withstand threats to its future.

Measures include the culling of crown-of-thorns starfish and work to improve water quality through a reduction in land run-off.

Surveys show the crown-of-thorns control program is successfully protecting coral on targeted reefs. The average coral cover on these reefs is 34 per cent, and 75 per cent have more than 25 per cent average coral cover — well above the 10 per cent critical threshold for coral recovery.

These gains have been made despite two severe tropical cyclones (Ita in 2014 and Nathan in 2015) which damaged several of the target reefs.

Visitors to the Great Barrier Reef are encouraged to support coral recovery by abiding by zoning rules which stipulate where and how certain activities can take place, reducing marine debris, and being careful not to anchor on coral.

Surveys into the extent and severity of the bleaching have been conducted by Great Barrier Reef Marine Park Authority staff and Queensland Parks and Wildlife Service rangers, the Australian Institute of Marine Science and the Australian Research Council Centre of Excellence for Coral Reef Studies.

**Note to editors:** Bleaching most commonly occurs when warm ocean temperatures cause thermal stress, leading corals to expel tiny algae, known as zooxanthellae, which live inside their tissues and provide corals with most of their food and colour.

Without the algae, the coral's bright white skeleton is revealed. Corals can recover from bleaching if heat stress lessens and conditions return to normal.

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